

**REMARKS**

**I. Status of the Application**

By the present Reply, the Applicants are amending claims 1-4, 8, and 13. No new matter is added. Claims 1-13 are currently pending in the application. Claims 1-13 have been rejected. The present Reply addresses each point of objection and rejection raised in the Office Action. Favorable reconsideration is respectfully requested.

**II. Statement of Substance of Interview**

The Applicants thank Examiner Zhao and supervising Examiner Betit for the courtesies extended during a personal interview with the Applicant's undersigned representative on May 17, 2011. The substance of the interview is recorded herein in Sections III and IV.

It is respectfully submitted that the instant STATEMENT OF SUBSTANCE OF INTERVIEW, including the substance recorded below, complies with the requirements of 37 C.F.R. §§1.2 and 1.133 and MPEP §713.04.

**III. Objection to the Claims**

The Office Action has objected to claim 8 because the meaning of the "non-target index" is allegedly unclear. To improve clarity, the Applicant is amending claim 8 to replace the term "non-target index" with "non-target flag." Support for this amendment can be found at least in FIG. 5 and paragraph [0036] of the specification. This amendment is not substantive, and does not change the scope

or meaning of claim 8. During the interview of May 17, 2011, Examiners Zhao and Betit agreed to withdraw the objection to claim 8 in view of this amendment.

**IV. Claim Rejections Under 35 U.S.C. § 103(a)**

Claims 1-5 and 9-13 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Publication No. 2002/0013658 to Tanaka et al. (“Tanaka”) in view of U.S. Publication No. 2003/0028316 to Miyahara (“Miyahara”), U.S. Publication No. 2002/0052894 to Bourdoncle et al. (“Bourdoncle”), and U.S. Patent No. 6,980,907 to Umezu et al (“Umezu”). Claims 6 and 7 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tanaka, Miyahara, Bourdoncle, and Umezu in view of U.S. Publication No. 2003/0140309 to Saito et al. (“Saito”). Claim 8 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Tanaka, Miyahara, Bourdoncle, and Umezu in view of U.S. Application Publication No. 2003/0231163 to Hanon et al. (“Hanon”). The Applicant respectfully traverses these grounds of rejection.

The Office Action states that the claims do not explicitly recite that the update substance data have an index that is not a tree index. To improve clarity, the Applicant is amending independent claim 1 to recite, *inter alia*, that the update substance data have a non-tree index as a search key that does not require any search tree data. Support for this amendment can be found at least in FIG. 4 and paragraphs [0032]-[0033] of the specification. The Applicant is also amending independent claims 3 and 13 in a similar manner. These

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amendments are not substantive, and do not change the scope or meaning of the claims. During the interview of May 17, 2011, Examiners Zhao and Betit agreed to withdraw the rejections of claims 1, 3, and 13 in view of this amendment. Examiners Zhao and Betit also agreed that the next Office Action issued would be non-final.

As discussed during the interview of May 17, 2011, Tanaka discloses that both the original search data (shown in FIG. 7A) and the new search data (shown in FIG. 7B) have a tree structure. Therefore, Tanaka fails to teach or suggest that “the update substance data are provided *without any search tree data*, have a *non-tree index* as a search key *that does not require any search tree data*, and include facility information,” as recited in claim 1. (emphasis added). Further, Tanaka fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data *and* an index-based search using the non-tree index of the update substance data,” as recited in claim 1 (emphasis added). On the contrary, as the Office Action acknowledges, Tanaka does not disclose update substance data that have a non-tree index as a search key, or using a non-tree index to execute an index-based search, as recited in claim 1.

In addition, the Applicant submits that Miyahara fails to remedy the deficient teachings of Tanaka. Miyahara merely discloses that map data includes a group of layers, each of which is divided into blocks (¶ [0081]). To

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update the map data, individual layers or blocks may be replaced with new data (¶ [0083]). Therefore, Miyahara does not teach or suggest providing initial search data and update search data *separately*, as recited in claim 1. Further, as the Office Action acknowledges, Miyahara fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the non-tree index of the update substance data,” as recited in claim 1.

Also, the Applicant submits that Bourdoncle fails to remedy the deficient teachings of Tanaka and Miyahara. Bourdoncle discloses a searching tool for searching and retrieving information on the Internet. In one embodiment, a database of entries is provided, and the entries are mapped to a set of categories (¶ [0022]). The categories may be organized in a tree structure (¶ [0070]). In another embodiment, the database may include an inverted index, in which the categories are entries of the inverted index (¶ [0027]). However, Bourdoncle does not teach or suggest *separately* providing initial search data (comprising search tree data having a tree structure and a plurality of sets of initial substance data specified based upon the search tree data) and update search data (comprising a set of update substance data that are provided without any search tree data and have a non-tree index as a search key that does not require any search tree data), as recited in claim 1. Further, Bourdoncle fails to teach or suggest executing “a substance data search by using a tree-based search based on the

search tree data of the initial search data and an index-based search using the non-tree index of the update substance data,” as recited in claim 1 (emphasis added). Specifically, Bourdoncle fails to teach or suggest executing a tree-based search of initial substance data, and also executing a separate index-based search of update substance data, wherein the initial substance data and the update substance data are provided separately.

Further, the Applicant submits that Umezu fails to remedy the deficient teachings of Tanaka, Miyahara, and Bourdoncle. Umezu discloses a map data processing unit that is capable of updating map data (col. 1, lines 44-48). However, Umezu does not disclose search data. Therefore, Umezu does not disclose update search data comprising update substance data, as recited in claim 1. More specifically, Umezu does not disclose update substance data that are provided without any search tree data and have a non-tree index as a search key that does not require any search tree data.

Umezu discloses a batch update method and a dynamic update method for updating the map data (col. 4, line 60 – col. 5, line 19). In both methods the map data are updated by using update data having the same format as the map data (col. 5, line 56 – col. 6, line 2). Therefore, Umezu fails to teach or suggest executing “a substance data search by using a tree-based search based on the search tree data of the initial search data and an index-based search using the non-tree index of the update substance data,” as recited in claim 1 (emphasis

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added). Specifically, Umezu fails to teach or suggest executing a tree-based search of initial substance data, and also executing a separate index-based search of update substance data, wherein the initial substance data and the update substance data are provided separately.

The Applicant submits that claim 1 is patentable over Tanaka, Miyahara, Bourdoncle, and Umezu for at least the reasons discussed above, as well as its additionally recited features. Because independent claims 3 and 13 recite features similar to those discussed above with regard to claim 1, the Applicant submits that claims 3 and 13 are patentable over Tanaka, Miyahara, Bourdoncle, and Umezu at least for similar reasons, as well as their additionally recited features. Further, claims 2, 4, 5, and 9-12 are patentable over Tanaka, Miyahara, Bourdoncle, and Umezu at least by virtue of their respective dependencies on claims 1 and 3, as well as their additionally recited features.

Further, Saito and Hanon fail to remedy the deficient teachings of Tanaka, Miyahara, Bourdoncle, and Umezu, and are not cited as allegedly disclosing the features discussed above. Therefore, claims 6 and 7 are patentable over Tanaka, Miyahara, Bourdoncle, Umezu, and Saito at least by virtue of their dependencies on claim 3, as well as their additionally recited features. Further, claim 8 is patentable over Tanaka, Miyahara, Bourdoncle, Umezu, and Hanon at least by virtue of its dependencies on claim 3, as well as its additionally recited features.

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**V. Conclusion**

If there are any questions regarding this Reply or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323, Docket No. 029267.58056US.

Respectfully submitted,

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/Suzanne C. Walts/

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Jeffrey D. Sanok  
Registration No. 32,169

Suzanne C. Walts  
Registration No. 60,831

CROWELL & MORING LLP  
Intellectual Property Group  
P.O. Box 14300  
Washington, DC 20044-4300  
Telephone No.: (202) 624-2500  
Facsimile No.: (202) 628-8844  
JDS/SCW:gs